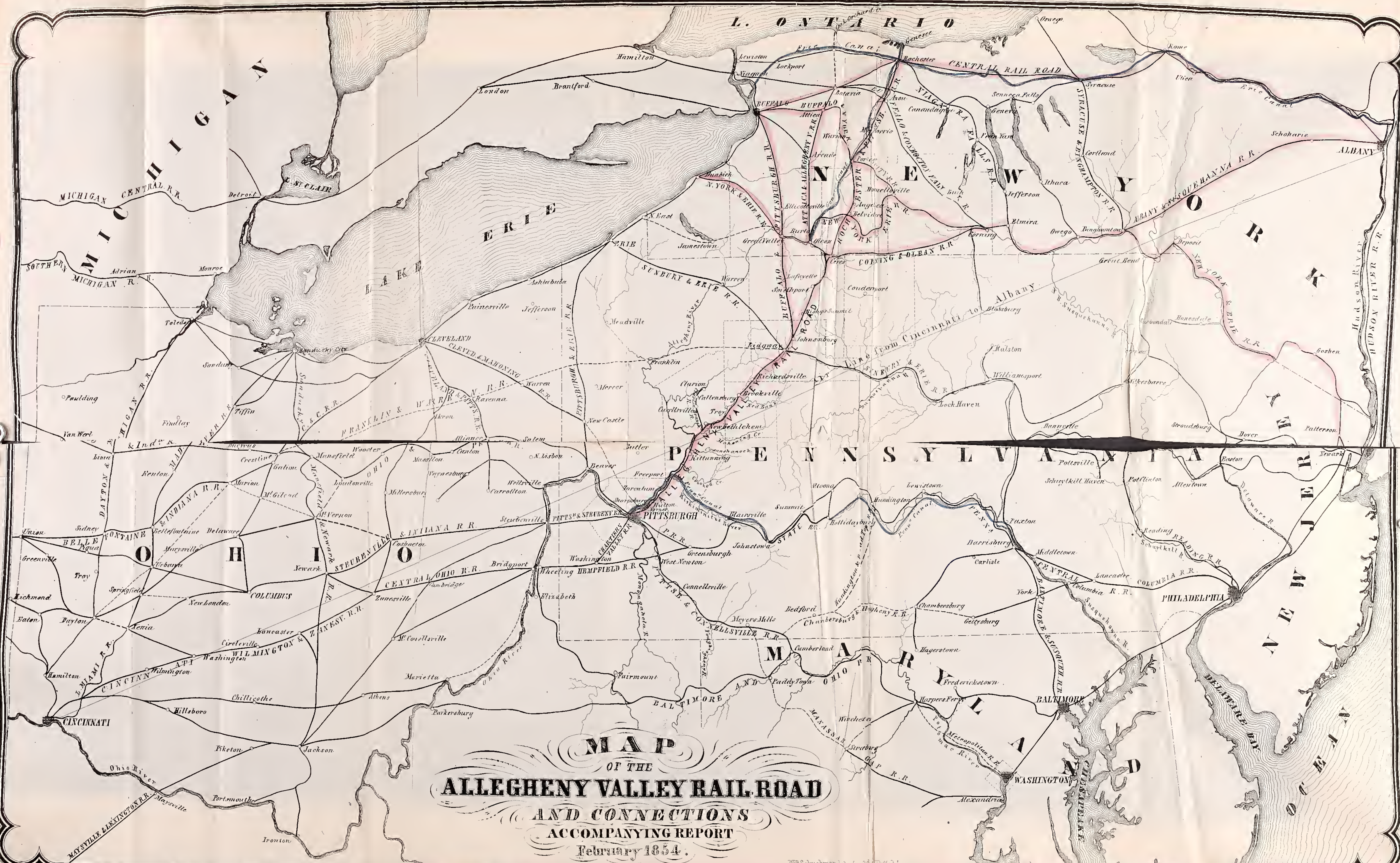


THE
T. H. M.
VITTEMERIA



MAP
OF THE
ALLEGHENY VALLEY RAIL ROAD
AND CONNECTIONS
ACCOMPANYING REPORT
February 1854.

Wm Schuchman litho 3d Pittsb

REPORT
OF THE
PRESIDENT AND MANAGERS
OF THE
Allegheny Valley Rail Road
TO THE
STOCKHOLDERS,
WITH THE
CHIEF ENGINEER'S REPORT,
AND
TREASURER'S STATEMENT.

Read February 7, 1854.

Pittsburgh:

PRINTED BY W. S. HAVEN, CORNER OF MARKET AND SECOND STREETS.

1854.

1854.

OFFICERS AND ENGINEERS.

OF THE

ALLEGHENY VALLEY RAIL ROAD.

PRESIDENT.

W. F. JOHNSTON,

MANAGERS.

JOHN T. LOGAN, <i>Treasurer.</i>	F. R. BRUNOT, <i>Secretary.</i>
GEO. W. JACKSON,	JOS. BUFFINGTON,
L. WILMARTH,	THOS. MCULLOCH,

ENGINEERS.

W. MILNOR ROBERTS, *Chief.*

GEO. R. EICHBAUM, *Associate.*

FRANK. WRIGHT, <i>Princ. Assis't.</i>	ROBT. F. GRAY, <i>Assistant.</i>
CHAS. M. BOYLE, “ “	ISAAC MORLEY, “
H. P. SULLIVAN, “ “	J. A. COULTER, <i>Topographer.</i>
ALEXANDER HAYS, <i>Assistant.</i>	J. M. CURLEY, “
JAMES C. NOON, “	EDWIN J. PARKE, <i>Rodman.</i>
JAS. Q. ANDERSON, “	THOS. MACKLIN, “
FRANK BOYLAN, “	SEBASTIAN WIMMER, “

J. J. SIEBENECK, *Draughtsman,*

CLERK.

J. GIBSON.

ANNUAL MEETING

OF THE

STOCKHOLDERS

OF THE

Allegheny Valley Rail Road Co.

At a meeting of the Stockholders of the Allegheny Valley Rail Road Company, held at the office of the Company, in the city of Pittsburgh, February 7th, 1854,

On motion of J. H. SEWELL, Esq., JOHN SHIPTON, Esq. was called to the Chair, and GEORGE E. ARNOLD appointed Secretary.

After the meeting was organized, Hon. WM. F. JOHNSTON, President of the Company, made a brief address to the Stockholders, referring in general terms to the importance and value of the improvements—the commanding position of Pittsburgh as a centre of trade, and the desirability of friendly and hearty coöperation on the part of the various rail road companies, and the citizens with each other, in order that the best use of the advantages referred to may follow, and then read the report of the President and Managers.

The report of the Chief Engineer, and the statement of the Treasurer, were then read, and, on motion of HENRY McCULLOUGH, Esq., seconded by WALTER BRYANT, Esq., it was

Resolved, That the reports and statement just read be accepted and published.

Mr. SHIPTON then submitted the following preamble and resolution, which, after some commendatory remarks from THOMAS BAKEWELL, Esq., and others, were unanimously passed :

WHEREAS, It is apparent that the natural and artificial advantages possessed by the City of Pittsburgh, render it the most important point for concentrating and distributing the business of the Eastern and Western portions of the union ; *And whereas*, to secure to our location the full benefits of these advantages, the friendly coöperation of our citizens and the united action of the various companies whose works terminate here are essential. Therefore,

Resolved, That it is expedient and desirable that the several Rail Road and Improvement Companies should aid and assist each other by all friendly action, in carrying the several lines to completion ; and that our citizens should encourage by all proper means, a friendly and sympathizing feeling in behalf of said works.

Messrs. John J. Y. Thompson, J. H. Sewell and Henry McCullough, were appointed by the Stockholders present, judges of the election for officers of the Company for the ensuing year, and were duly sworn, who reported that the election was duly held, and resulted in the unanimous reëlection of the following officers :

PRESIDENT.

WILLIAM F. JOHNSTON.

MANAGERS.

GEO. W. JACKSON,	F. R. BRUNOT,
L. WILMARTH,	JOS. BUFFINGTON,
JOHN T. LOGAN,	THOS. M'CULLOCH.

Whereupon the meeting adjourned.

[Signed]

JOHN SHIPTON, *Chairman*.

GEORGE E. ARNOLD, *Secretary*.

REPORT

O F

PRESIDENT AND MANAGERS.

To the Stockholders of the Allegheny Valley Rail Road Company:

IN submitting the first regular Annual Report of the "Board of Managers of the Allegheny Valley Rail Road Company," a proper occasion is presented to congratulate the Stockholders thereof, and the friends of the enterprise, upon the prosperous condition of its affairs.

Experience has demonstrated, that public improvements, whether undertaken by States or individuals, encounter at their commencement the greatest difficulties. To obtain the necessary funds, popular confidence must be secured. To accomplish this, prejudice and ignorance are to be removed and instructed, superannuated opinions and false theories are to be controverted and answered, misapprehensions are to be corrected, and the advantages and necessities of the work to be exposed and maintained. The questions of ability to construct, and of utility when erected, must be examined and discussed, and results truly set forth at the incipency of these improvements, if ultimate success is expected from them.

Impressed by the correctness of these views, the Managers have not declined investigation and discussion of the merits of the road under their charge. To the full examination and exposition of the value of our work, made at an early day, in presence of the citizens resident along the general line of its location, its present healthy condition is mainly attributable.

The conviction of all persons who have candidly examined the question, that vast benefits will accrue to this city and adjacent regions by its construction, has given to our enterprise warm, active and coöperating friends, among the intelligent and liberal portion of our population.

The present pecuniary means of the Company, and the daily increasing confidence of the citizens in our ability to erect the work, justify an assurance to the public, that the completion of this great thoroughfare is beyond all reasonable or probable chance of failure. An improvement requiring so large an expenditure of labor and money, cannot be built in the period of a day; it demands, for a proper and economical construction, time and attention.

The history, available means, probable connections, and prospects of business of the improvement, are herewith presented to the Stockholders.

HISTORY.

On the 4th April, 1837, the Legislature of Pennsylvania authorized the incorporation of a Company to construct a railroad from the city of Pittsburgh, along the valley of the Allegheny river, to a point near the southern boundary line of the State of New York. This action was among the earliest movements made in the West towards the erection of iron highways, since, so largely instrumental in securing the comforts and increasing the prosperity of the western country.

It was originally designed by the construction of the work authorized, to afford a safe communication between the trade of the Ohio river, at the head of its steamboat navigation, with the traffic of those vast inland waters, Lakes Ontario and Erie; and also, to furnish a channel of intercourse between the North-eastern and South-western portions of the Union. To effect these results, the construction of the New York and Erie Rail Road, and of the Genesee Valley Canal, was essentially important.

The State of New York had in progress of erection, a first class canal, leading from the central line of the canals of that State near Lake Ontario to the head waters of the Allegheny river, at or near the proposed terminus of our road. At the same time, a few far-seeing citizens of that State, were endeavor-

ing to arouse and fix public attention upon the importance of extending the New York and Erie Rail Road to Lake Erie.

A general prostration of the moneyed interests of the country, retarded the progress of the Erie Rail Road, and compelled a suspension of the Genesee Valley Canal. Whilst the proposed outlets of our Road remained unfinished, its erection was necessarily and properly postponed.

The law, requiring the adoption of the circuitous line by the valley of the river, was modified, and the omission of legislative authority to connect with the works of other States, was supplied by proper enactments. During the delay of our work, the events of each year furnished new inducements for its construction. The section of country within its business influences was rapidly filling up with an active and industrious population; developments were being made of its mineral and agricultural resources, and its peculiar fitness for sustaining a large agricultural population, and maintaining an extensive manufacturing industry, was being fully established. The New York and Erie Rail Road had been finished, and astounding results were brought before the business public. The State government of New York had determined upon the completion of the Genesee Valley Canal. These, with other facts, induced the belief that the proper time had arrived for active and efficient operations on the Valley Road.

A number of citizens, resident in this and adjoining counties, influenced by the liberal and just sentiment, which teaches that the improvement of a country by the construction of the best devised channels for the passage of persons and things, must result beneficially to their fellow men, and repay to themselves, in the increased comforts and augmented business of the community, their outlay, subscribed the stock required by law to procure the Letters Patent. These were issued on the 10th day of January, 1852.

On the 12th February, 1852, the Company was duly organized by the election of the present officers, who have been continued by subsequent elections; and on the 23d March, 1852, the Chief Engineer and Assistants were appointed.

Shortly afterwards, several Corps of Engineers were engaged, and the preliminary explorations were commenced. Since that time, upwards of fifteen hundred and fifty miles, on different

lines, have been thoroughly examined. The profiles, maps, estimates, &c. of all the lines, being submitted to the Board, a careful and laborious examination resulted in the adoption of the line since located and now under contract, as being the cheapest and most direct between the extreme points, and as being most favorable in regard to curvatures and gradients.

Whilst the preliminary surveys were being made, the President and Managers visited the several counties interested, from location, in the construction of the work, and explained to the citizens and constituted authorities thereof, the nature and advantages of the enterprise, and urged the necessity of their friendly action, to secure successful results. From this effort, such happy consequences ensued, that on the 22d February, 1853, the Company was in condition to invite and consider proposals for the construction of the entire work. Examination and analysis of the many biddings, rendered it certain, that the offer of Messrs. Chamberlains, Leech & Co. was the most favorable and available. On the 4th March, 1853, a contract was accordingly executed with these gentlemen for the erection of the whole work, iron excepted. The contract provided that the work should be completed in divisions, and, unless detentions by act of Company prevented, at the following times:

1st Division—From Pittsburgh to Kittanning—forty-three miles—1st November, 1854.

2d Division—From Kittanning to Brookville—forty-five miles—1st July, 1856.

3d Division—From Brookville to Clarion river, above Johnsonburg—forty-eight miles—1st July, 1856.

4th Division—From Clarion River, passing Bishop's Summit, to State line—forty-three miles—1st December, 1855.

In addition to the fact, that these gentlemen were experienced and competent contractors, whose energy and skill had carried to completion several important public improvements, they offered a strong inducement, for awarding to them the construction of the entire road, in their proposal to accept in payment one-third part of the price of the work, in the stock of the company, *at par*.

The first ground was broken upon the 17th of March 1853 in the presence of the late worthy Mayor of Pittsburgh, and a numerous assemblage of citizens and strangers. Contractors,

however, did not fully commence work, until on or about the 1st of May. From that time our active operations have been prosecuted without serious interruption.

An investigation, before the highest judicial tribunal of the State, in relation to the validity of municipal corporation subscription to public improvements, slightly interfered with and retarded our operations. While the agitation of the question involved the company and its stockholders in some loss, the ultimate decision, reëstablishing long settled and adjudicated principles, and affirming the clear validity of such subscriptions, will render them more valuable, as being no longer obnoxious to legal objection.

To bring into use at an early date the 4th division, for the purpose of transporting bituminous and other Coals to Western New York and the Lakes, the Managers made a contract with the Corning and Olean Rail Road Company, to commence the immediate construction of that portion of the line, upon terms in said agreement mentioned. Said Corning and Olean Company agreed to procure a bona fide subscription of \$500,000 to our capital stock, and also to pay for the use of ten miles of our road, near its north-eastern terminus, eight per cent. per annum, on its cost of \$25,000 per mile.

The work on this section will be commenced as soon as some pending negotiations, between the Corning and Olean, and New York and Erie Rail Roads are completed, the rights of way secured, and the necessary funds by payment of the subscription alluded to, are received. All this, it is presumed, will be accomplished at a very early date.

The parts of the road known as divisions 2 and 3, extending from Kittanning to a point 10 miles this side of Bishop's summit, are ready for active work, which will be commenced thereon, as soon as rights of way are procured and other necessary financial arrangements are consummated.

On the 1st division, between Pittsburgh and Kittanning, three-fifths of the grading, masonry and bridging, are already done; contracts have been made for the cross-ties, and some of them delivered. The rights of way on this division, with two or three trifling exceptions, have been secured; valuable grounds, in and adjoining the city, and at other points, have been purchased, for outer and inner freight depots and water stations. The necessary

facilities to enter the city and pass along its streets, it is confidently believed will be cheerfully given to our company, (so peculiarly a Pittsburgh project,) by the constituted authorities, whenever the same are required.

Negotiations are now pending, for the purchase of the rails required on this part of the line, which, if successful, will enable us to complete the road to Kittanning during the coming summer. The high prices demanded for rail road iron have prevented, hitherto, any arrangement for its purchase.

AVAILABLE MEANS.

To appreciate correctly the extent of the pecuniary abilities of the Company, the probable cost of the work must be considered.

The Chief Engineer, Mr. Roberts, after careful revision, estimates the cost of the entire road, in complete running order, including depot and station grounds, rights of way, damages, engineering and incidental expenses, at the sum of \$5,571,360 07. This estimate excludes rolling stock and depot buildings.

The subscriptions to the capital stock are as follows:

By individuals and contractors, say	\$1,400,390	
County corporations, - - -	1,251,254	
City and boroughs, - - -	450,000	
Rail road corporations, as per		
agreement, - - -	500,000	
	<hr/>	3,601,644 00
To be provided by an issue of company bonds,	\$1,969,716 07	<hr/> <hr/>

Several offers have been made, by responsible firms, to furnish at cash rates, engines, cars, and other machinery. In these propositions, provision is made for a large portion of the price in the stock of the company.

PROBABLE CONNECTIONS.

The value of a rail road depends upon the amount of trade concentrating at its extreme points, arising locally from its construction, and that found within its business influence.

In assuming the responsibility of expending large sums, in the construction of our work, the connections it will control, and the local traffic it legitimately commands, have received the consideration of the Board. To these we invite attention.

The western terminus of our road is *Pittsburgh*. Examine its importance as a CENTRE of travel and trade :

1st. The Ohio river; affording a steam navigation in extent many thousands of miles, and reaching every point throughout the vast valley of the Mississippi, is first in importance. On this immense highway is carried a larger tonnage than can be moved by all the rail roads belonging to the States whose borders it waters. Always open for navigation about the first of February, it furnishes, by cheapness in the transportation of freights, an avenue for trade, that no artificial improvement can equal.

At the head of this river, the junction of the Monongahela and Allegheny, and at the point, where steam navigation has its most eastern limit, our freight depot is located. This position will enable us to connect with, and transfer trade to, the steam boats of the Ohio, upon the most favorable and economical terms.

2d. The Monongahela slackwater penetrates the rich valleys of the Monongahela and its tributaries, and brings to us the products of their agriculture, and of their minerals and forests.

The last year's tonnage upon this improvement, amounting to 577,941 tons, is conclusive evidence of its value as a feeder to our trade and commerce. It carried upwards of 100,000 through and way passengers. Its contemplated extension, to the Virginia State line, and thence to a connection with the Baltimore and Ohio Rail Road, will add to its value and usefulness.

3d. The Ohio and Pennsylvania Rail Road, now in successful operation, penetrates a distance of 187 miles, through the rich agricultural and mineral regions of Western Pennsylvania and Eastern Ohio. It unites in friendly association, with various lines of railway, leading to Cincinnati, to Chicago and to St. Louis. The reports of earnings, for the present year of its workings, demonstrate the value and greatness of its business.

Receipts for 1853, \$668,004 49.

4th. The Pittsburgh and Steubenville Rail Road, now far

advanced towards completion, will furnish an outlet of vast importance to the trade of Pittsburgh. Extending to the Ohio river at Steubenville, and there connecting with several lines of well-constructed rail roads, it will open with these, highways to various portions of Ohio and Indiana, and to the immediate upper valley of the Mississippi. By its construction, we shall secure the shortest line, between this city and Cincinnati.

5th. The Chartiers Valley Rail Road unites us with the rich and populous County of Washington, and by connections with other roads, carries our trade to Wheeling, and thence to Southern Ohio, &c. The subscriptions already made to this work, and the energy of its management, promise an early completion and subsequent great usefulness.

6th. The Cleveland and Pittsburgh Rail Road, a work already constructed and in use, from Cleveland to Wellsville, on the Ohio river. The extension of this improvement, either by, in part, the Ohio and Pennsylvania Rail Road, or *directly* to Pittsburgh, will bring a valuable trade, that cannot fail to be felt in our business relations, and add largely to our position, as a point desirable for eastern connections.

7th. The Pennsylvania Central Rail Road,—an admirably constructed work, connecting this city with Philadelphia and Baltimore. Its revenues during the past year, and while incomplete, of nearly \$3,000,000, show with convincing force, the extent of its tonnage and passenger travel, and indicate its great future. The success of the improvement is well known to the country.

8th. The Pittsburgh and Connellsville Rail Road, will connect our city with the Baltimore and Ohio Rail Road, at Cumberland, Maryland. It will open an extensive region of finely cultivated and improvable country, containing inexhaustible deposits of mineral wealth, with capacities for high agricultural improvement.

From the known energy of the gentlemen connected with its management, and the means at their disposal, we may confidently expect an early completion of this branch of our rail road system. To argue the question, of the value of this improvement, in this community, where its merits are known and appreciated, would be a waste of time.

9th. The Pennsylvania State Canal has its western terminus in Pittsburgh, and by it, the waters of the Ohio and those of the Susquehanna and Delaware, are, for business purposes, united. The tonnage carried upon the canal, to and from Pittsburgh, during the last year, not appearing in the Canal Commissioners' Reports, no accurate statement can be given of it. Its extent, however, is sufficiently known to demonstrate the importance of the improvement to our city and Commonwealth. The rail roads now in progress around us will render it still more available and important as a channel of business and trade.

These avenues, natural and artificial, must constitute in all future time, Pittsburgh, a *centre* and *radiating point* of commerce and travel, scarcely susceptible of over-estimation.

If to these many avenues, for bringing to and taking away trade, we add the fact, that the natural supports of industry are closely around her borders, and within her ready and cheap control, some conception of our peculiar adaptation, as a point for present and great future extension of business, may be gathered.

When all our projected improvements are completed, who would venture a computation of the extent and amount of our commercial and manufacturing industry. To do so, would involve the risk of being declared an impracticable visionary.

Thirty miles north-east of Pittsburgh, our road is intersected by a projected railway leading from the Pennsylvania Central Road to Cleveland. This work will bring to us a large local trade from the valleys of the Kiskiminitis and Buffalo. At the same point we pass the Pennsylvania Canal, from and to which an extensive traffic will pass over our Road.

At or near Ridgway, 121 miles north-east of Pittsburgh, the Sunbury and Erie Railroad, when constructed, will connect with our work. The region of country east of Ridgway, on the line of the Sunbury and Erie Road, it is said, abounds in iron ores and coals. In seeking the great iron workshop, Pittsburgh, we may justly anticipate, from the produce of the iron ores, a large tonnage. West of Ridgway is found a heavily timbered region, the products whereof will find a market in this vicinity, by our Road, at most seasons of the year.

South of Ridgway, another railway, leading from the West, is projected. It is probable this work will not be extended

farther than to a connection with our Road. If such should be the fact—that road being constructed—the northern end of our line will require, to do the business upon it, a double track at a very early date.

The north-eastern terminus of the Valley Road will be at the State line, near Ceres, McKean county.

The various rail roads and improvements brought together at this place necessarily constitute a *centre* of trade and commerce rarely equalled in any location, apart from the largest cities.

1st. The New York and Erie Rail Road passing from the City of New York to Lake Erie, with its connecting branches and associated lines, controls the local trade of Southern and Western New York, and Northern Pennsylvania and New Jersey. A connection with this grand Highway, carries us to Lake Erie at various points, and unites us with the City of New York. The construction of the Albany and Binghamton roads, opens the most direct line between our work and New England, and Boston. The facilities thus afforded, to reach all parts of New York and New England would alone justify the building of our railway, if no other connections or outlets existed.

2d. The Genesee Valley Canal, in progress of construction, by authority of the State of New York, will constitute an important outlet for heavy tonnage, particularly coals, passing over our road. With a northern termination, on the central canals of New York, near Lake Ontario, and passing through the highly cultivated agricultural region of the Genesee valley, its local, as well as outside trade, must be exceedingly valuable. The scarcity, of other fuel in this section of densely populated country, as well along the Genesee, as the main canals of New York, demands our coals. Plaster, abounding there and so much needed by us, will constitute a profitable reciprocal tonnage, at least, to some extent.

3d. The Corning and Olean Rail Road, favorably referred to in the last report, of the New York and Erie Company, as lessening the distance on that road, between all points south and west of it, will afford a direct line to our eastern connection with the New York and Erie Road. It unites us with the trade of the Chemung Canal, the Couhocton Valley Rail Road, and other extensive improvements at Corning. By its erection, we shall

secure an amount of trade and travel, now wholly inaccessible to us, not easily over-estimated.

4th. The Attica and Allegany Valley Rail Road, in rapid progress of construction, opens an outlet to Buffalo and Rochester, and to the central lines of railways, in the State of New York, at these and various other points. Passing through a densely peopled district of country, large quantities of coal from Northern Pennsylvania, will be required to supply the local demand. The contemplated extension of this work to Lake Ontario, at or near Oak Orchard Creek, largely increases its value to our work. This improvement may be considered a part of our line to the Lakes.

5th. The Buffalo and Pittsburgh Rail Road, extending from Buffalo by direct line, meets our Road at or near Bishop's Summit. The liberal subscriptions to the stock of this road, by the City of Buffalo, and the energy of its management, render certain its early completion. Large quantities of coal, to supply the demands of Buffalo, with its varied industry and extensive steam marine, as well as the valuable trade of that city seeking a South-western market, will fully employ the capacity of this work. We anticipate from it a most profitable business on parts, if not on the whole, of our line.

6th. The Rochester and Pittsburgh, or Genesee Valley Rail Road, passes through the Valley of the Genesee, and connects with various roads crossing the said Valley. The enterprise and business energy of the citizens along its route, and the vastness of the country's resources, constitute a present and constantly increasing demand for our fuels and fabrications. Among the earliest of our proposed northern connections, we still regard its construction as highly desirable, and important to our success.

The four last named roads are being built in express reference to the connection and outlets afforded to them by the construction of the Allegheny Valley Road. This fact is deeply interesting to Pittsburghers. These works constitute the *centre* of population and business at our north-eastern terminus. The Allegheny Valley Road, connecting these important points of concentrated commerce, without the possibility, at any future time, of rival lines, may challenge comparison with any improvement of similar extent in the United States. While its points of termini remain places of commerce and trade, its business must be remunerative.

PROSPECTS OF LOCAL TRADE.

Reference to the *local* advantages possessed by Pittsburgh for manufacturing purposes has been made. A full expose of the business of this city and its vicinage, with estimates of its capabilities for healthy augmentation, would require more space than is permitted in a Report. In the construction of iron fabrics, glass-wares, and many other articles of skill and labor, our operations are unrivalled in extent and quality.

The probabilities of large increases in manufacturing industry are manifest. In several very important branches, for which our position adapts us, slight progress has been made. [See note.] With upwards of twenty largest class rolling-mills, thirty or forty extensive foundries, twenty glass works, numerous cotton and flouring mills, and the endless variety of trading and industrial establishments, existent with us, and in successful operation, the *value* of our trade *to other cities and districts* may be estimated. In the rapidly increasing population of the city and its vicinage, with the safe and healthful additions annually being made to our workshops and manufactories, a prosperity may be justly anticipated resulting in an increased and valuable traffic with our neighbors. The fabrications of Pittsburgh are required throughout the valley penetrated by our Road, and from it, iron and lumber, essentials to the prosperity of the city, will seek, in return, a market.

New enterprises and additional population will demand larger supplies from the agriculturalist and gardener, whose produce will find by our line an easy access to market.

Along the line of our road for eighty miles, the country traversed is rich in all the elements of trade. Coal and iron ores abound, large and numerous manufactories of iron, lumber, salt and grains are in operation; and others only await the construction of proper highways, to spring into existence and usefulness.

NOTE.—No locomotives are constructed, and until within a few months, no rail iron was made in this neighborhood. The necessary supplies of raw material, the fine quality and great abundance of coals, the skill of our workmen, healthy climate and cheap living, with the additional fact, that all the different gauges of track of railways used in the country, are being laid upon roads terminating at this point, would seem to render our city peculiarly fitted as a location for such manufactories.

The agricultural capabilities of the country are unsurpassed, in any other district of equal extent, surrounding our city. The population is increasing at a ratio, annually, greater than that of any rural portion of the Commonwealth. At no remote distance from the city, and within less than thirty-five miles from the Pennsylvania Canal, on the line of our road, are deposited large bodies of coal, which an eminent Chemist in Boston, pronounces a pure Cannel, "inflammable at the same stage of decomposition as good Scotch, with the white light of the best Wigan (English) Cannels." Further along the line, are found extensive beds of Bituminous Coal, well located for shipment to our northern terminus. The lumber on the middle part of our line, will furnish for many years, a heavy local business, the extent whereof may be judged from the report of our Chief Engineer. The lands now covered by timber, are well suited for agricultural purposes, whenever the forest is removed.

When it is remembered that more than half of our road passes through a highly improved country, and the residue traverses a region containing immense resources for trade—now rapidly filling up with an energetic people, notwithstanding the want of outlets and facilities to reach markets, &c. some idea may be formed of its future demands upon our road as a common highway.

The New York and Erie road was constructed for more than half its length, through a country less improved, than that traversed by the middle portion of our line. Its erection, brought with it population, business, improvement and wealth, and as a consequence its local trade, is *now* a principal part of its immense business and revenue. It is fair to presume that similar results will attend the completion of our enterprise, similar in character.

The importance and extent of our terminating points, and the immense commerce and population they represent, the facilities we shall afford to reach the Northern Lakes and Eastern Cities, the inducements offered to them by our Western connections, and the prospects of present and future local trade, justify the Board in the expression of an opinion, that the stock of the Allegheny Valley Rail Road, will be a safe and paying investment. The astounding results, far exceeding probable estimates, arising from other similar works, have not influenced their minds in making this statement, although properly, these constitute a fair and legitimate basis for such calculations.

We beg leave to present our thanks to the Commissioners of the several Counties, and constituted authorities of the Cities and Boroughs interested in the work, for the kindness extended by them, to your Board, as also for the friendly regard they have manifested for the improvement under their charge.

To the Chief and Resident Engineers and their Associates, our thanks are due, for the correctness, dispatch, and ability, with which they have severally performed their arduous duties.

The reports of the Chief Engineer and Treasurer, are herewith submitted; to both, we invite consideration and examination.

All of which is most respectfully submitted,

WM. F. JOHNSTON, *President.*

JNO. T. LOGAN,	} <i>Managers.</i>
GEO. W. JACKSON,	
F. R. BRUNOT,	
L. WILMARTH,	
JOS. BUFFINGTON,	
THOS. M'CULLOUGH,	

ENGINEER'S REPORT.

HON. WM. F. JOHNSTON,

President of the Allegheny Valley Rail Road Co.

SIR—I have the honor to present the following Report on the condition and prospects of the Allegheny Valley Rail Road:

The preliminary surveys were commenced April 6th, 1852, under the immediate direction of George R. Eichbaum, Esq. Associate Engineer; my engagements at that time, on other improvements, preventing me from devoting much personal attention to the field operations. The surveys were continued by three full Corps of Engineers through the entire season, and at the close of the year, two distinct main routes, and numerous alternate lines, had been instrumentally examined, between Pittsburgh and the New York State line, affording data for approximate general estimates of cost.

Early in the summer of 1852, the surveys between Pittsburgh and Kittanning having shown that a line on either side of the Allegheny river presented decisive advantages over any interior route, in grades, curvature, distance, and cost, the Board, at their meeting of July 9th, directed a final location of two lines: one on each side of the river from Sharpsburgh upward, and one on the eastern side of the river, between Sharpsburgh and the city. These locations were made; and on December 18th the Board directed the Chief Engineer to advertise for proposals for constructing the work between Pittsburgh and Kittanning, and also for all the work, except furnishing iron, on the whole Road to the New York State line.

Agreeably to the terms of the advertisement, the necessary plans, profiles, and specifications, were duly prepared, and submitted to the inspection of Contractors assembled from various quarters of the Union, until the evening of February 22d, 1853.

The letting was numerously attended by Contractors, of great experience, and the bidding was judicious and remarkably uniform. After a thorough and careful examination by the Board of all the proposals, the contract for the entire line was allotted to Messrs. J. & S. Chamberlain, of Ohio, and David Leech and James Fenlon, of Pennsylvania, under the firm of Chamberlains, Leech & Co. The Board then adopted the route on the eastern side of the river to Kittanning, leaving the question of route beyond Kittanning to be determined by the result of additional surveys to be made.

The contract includes the graduation, masonry, bridging, culverts, drains, cross-ties, laying track, and ballasting with gravel or broken stone. The furnishing of the iron, spikes and chairs, depot buildings, and rolling stock, to be otherwise provided for. It contains a specific price for each item of work, and a specification, carefully prepared, describing the manner of performing every part; and designates the period of completing and delivering the respective main divisions, namely: First division, between Pittsburgh and Kittanning, forty-three miles—the grading, masonry, and bridging, July 1st, 1854, and all the work by November 1st, 1854. On the northern forty miles next the New York State line, within two years from the commencement of the work on that part; and on the entire line, on or before July 1st, 1856—provision being made for any delay in commencing, on the part of the Company. The contract bears date March 4th, 1853.

Immediately after the allotment, Messrs. Chamberlains, Leech & Co. were furnished with the bids received on the sections between Pittsburgh and Kittanning, and very soon entered into contract with responsible men for the performance of the work, requiring the completion of the graduation and masonry on the first division on or before the first day of June, 1854.

On the 17th of March, 1853, in accordance with public notice, the formal breaking of ground was celebrated with appropriate ceremonies, on the land purchased by the Company, in the borough of Lawrenceville, for their outer Depot. The Mayor of the city of Pittsburgh, Hon. Robert M. Riddle, in the presence of a large body of respectable and influential citizens of the cities of Pittsburgh and Allegheny and the adjoining districts,

excavated the first shovelful of ground; and thus was this great public improvement begun.

The Contractors on the first division shortly after gathered together good forces on their respective sections, and the work has since been vigorously prosecuted without interruption. The first monthly estimate was paid in the beginning of June, and regular monthly payments in cash have been continued ever since.

The graduation and masonry are now three-fifths done; and, should the spring prove favorable, they will be entirely completed by the first day of July next.

In November, 1853, our Chief Contractors made an agreement with S. W. Hall, Esq. of New York State—an experienced engineer and bridge builder—for furnishing the materials and constructing all the bridge superstructures of fifty feet span and over, on this division; said work to be entirely completed on or before July 1st, 1854. They have also made contracts for the delivery of all the cross-ties, part of which have already been delivered. Should no unlooked for delay occur in the delivery of the iron, the track may be laid on this division some time in the autumn of this year.

As early as the weather would permit, in the spring of 1853, engineering parties were fully organized and equipped, and the surveys were resumed between Kittanning and the New York line.

On the 25th of July last, my report, showing the results of these surveys, was presented and read to the Board, accompanied by maps, profiles, and calculations of the several routes surveyed. After a careful examination of the merits of the respective routes, the Board adopted the line leaving the Allegheny river at the mouth of Mahoning, passing through Brookville, Ridgway and Bishop's Summit, as being the shortest and cheapest, with the best grades and curves. At the same meeting, the Board directed the Chief Engineer to prepare a map of the various lines traced, to be published with the Report on the Surveys, (which was afterwards done;) and also instructed him to proceed forthwith to locate the Road between Kittanning and the New York line, on the route designated.

Pursuant to these proceedings, three distinct location parties were immediately organized, under the charge of Messrs. Franklin Wright, Henry P. Sullivan, and Charles M. Boyle, all experienced Engineers.

The preliminary surveys having shown that the heaviest work occurs between Kittanning and Brookville, on the second main division, and on both sides of Bishop's Summit, on the fourth main division, the parties were directed to locate as follows: From Kittanning towards Brookville, under Mr. Wright; from Brookville towards Kittanning, under Mr. Sullivan; from the New York line towards Bishop's Summit, under Mr. Boyle.

Our Chief Contractors were notified of the time when the line would be located in readiness for letting between Kittanning and the vicinity of Brookville, and accordingly advertised for proposals to be received at Kittanning until the 18th day of October last. Plans, profiles and specifications were duly prepared; and at the time appointed, a large number of first-class Contractors attended and bid for the work of graduation and masonry, including the tunnels, (five in number,) all of which are embraced in a distance of eight miles, between the mouth of Mahoning and Lavelly's Summit.

Unexpected difficulties in procuring the right of way north of Kittanning, and other causes, rendered it inexpedient to press the actual commencement of work on this division of the line, and nothing has yet been done beyond Kittanning.

Immediately after the letting just mentioned, Mr. Sullivan's party resumed the location, beginning three miles below Brookville, and thence along the Red Bank Valley; and continued on that duty until the first of December.

Mr. Boyle, having finished the location from a point near the State line to Bishop's Summit, (about thirty miles,) was directed to extend it down Instanter branch of Clarion river towards Johnsonburg—to within seven miles of which place he carried the location at the close of November.

At a meeting of the Board, July 29th, a resolution was passed directing the Chief Engineer to make a survey and examination of the ground, "from near the north end of the tunnel at Lavelly's summit, between Red Bank and Mahoning, to or near the town of Clarion, by way of Leatherwood and Licking creeks, and the Clarion river, &c."

In accordance therewith, after the letting of October, Mr. Wright was detailed, in charge of a full party, on this duty.

Our former surveys had covered a considerable portion of the ground, but, before the new surveys were commenced, I took

occasion, in company with one of the Board, to examine the proposed route of this branch line, and directed the surveys accordingly. Mr. Wright completed this duty in the latter part of November.

The maps, profiles and calculations connected with it, are herewith respectfully submitted, together with a detailed description and remarks, which will be found in another part of this report. It may be stated in this place, in general terms, that the distance, as surveyed between the main line and the town of Clarion, is thirty-four and three-fourth miles, and that the route is quite favorable.

It now only remains, during the ensuing season, to make a revised and final location of forty-two miles of the main line, between the valley of the Red Bank and the valley of Clarion river, at a point fifteen miles above Ridgway, which, with two parties, will occupy about six weeks.

On the first of December, 1853, the three locating corps were, in great part, disbanded; each principal assistant in charge being instructed to retain only two of the most experienced assistants to aid in completing the maps, profiles and calculations of the final locations.

This work has been well done, and is herewith presented for the inspection of the Board. It may be proper to suggest, in this connection, that, by a more thorough examination of the ground between the valleys of Red Bank and Clarion, a considerable improvement may possibly be effected in the shape and cost of that portion of the line.

This re-examination could not have been accomplished during the past year, without the employment of an additional corps, which was not deemed expedient.

This comprises the general history of the surveys, locations and lettings, up to the present time.

The line has been considerably improved in the final location, at various points, without adding to the total cost. The passage of the dividing ridge between the waters of Mahoning and Red Bank has been advantageously modified, by reducing the summit grade forty feet.

The crossing of the main ridge, at Bishop's summit, has also

been essentially improved. The summit cut has been reduced from thirty-eight feet to thirty feet, whilst the length of cutting has been changed from 4,000 feet to 2,200 feet, saving over 40,000 cubic yards of deep cut excavation.

Numerous minor, but valuable, improvements have been made in grade and curvature along the route. The policy pursued by the Board, in allowing the Engineer Department ample time and equipments, has proved to be one of true economy.

Perfection is not claimed, but the time and money devoted to thorough investigations in an improvement of such magnitude and importance, are well appropriated towards its attainment.

CONDITIONS OF THE WORK BETWEEN

DUFFSBURG AND KITTANNING.

Although the ground was broken on the 17th of March, but very little work was done by contractors till towards the month of May. Since then, some 600 men, generally, been a good force kept on the sections and at the masonry.

The amount of work done to the close of December, 1853, is \$334,005 75.

The total estimated cost of grading, masonry and bridging on this division is \$609,411 66.

The amount required to complete these items, is, therefore, \$274,475 68.

This estimate includes the cost of grading and masonry for a double track between the city and Sharpsburgh, (about five miles) and requisite grading for side tracks on the route, and the grading for a double track on nearly the whole of the bluff sections.

No work has been done on sections No. 1 and 2, nearest the city, and nothing but the grubbing on section No. 40. Sections No. 11, 19, 27, 41 and 42, are finished. The heaviest section on the division, namely, No. 13, will be finished on or before the first of March next.

At the end of the past year, the grading and masonry were nearly three-fifths done; at this time more than that proportion is finished.

The superstructure of the bridges was not let out till late in

Autumn, and although the contractor has been busily engaged in procuring materials, no estimate has yet been returned on this part of the work.

A carefully revised estimate of the cost of the whole line has been made out, and is herewith submitted.

REVISED ESTIMATE OF COST.

Summary of estimated cost, based on the contract prices, which are ample to complete the work.

GRADUATION, MASONRY AND BRIDGING.

First Division, between Pittsburgh and Kittanning, (43 miles,)	\$ 609,471 63
Second Division, between Kittanning and a point 2 miles below Brookville, (43 miles,)	1,066,890 16
Third Division, between said point and the valley of the North fork of Clarion, 7 miles above Johnsonburgh, (50 miles,)	594,336 82
Fourth Division, from said point to the New York State line, (43 miles,)	903,256 00
	<hr/>
	\$3174,054 61

being an average of \$17,732 per mile, on grading, masonry and bridging.

Add, for engineering, land damages, right of way, depot grounds and contingencies,	\$ 317,405 46
179 miles of track superstructure at \$11,000 per mile,	1,969,900 00
10 miles of side tracks at \$11,000,	110,000 00
	<hr/>
	\$5,571,360 07

being an average of \$31,125 per mile, on a length of 179 miles.

Track superstructure includes cross-ties, iron-rails, spikes and chairs, laying track, gravel or stone ballasting, and contingencies belonging to this branch of the work.

The foregoing estimate is made out on the present high prices of Iron.

The estimate returned in July last, founded on the preliminary surveys, was a trifle under \$30,000 per mile. The rise which has since taken place in the price of Iron accounts for the difference.

The cost of buildings and rolling stock is not included. These items depend much upon the extent of the business of the road. One thousand dollars per mile would furnish very liberal provisions for the necessary water stations and depot buildings. The amount required for the rolling stock depends entirely on the business to be done.

GENERAL DESCRIPTION OF THE ROUTE

Between Pittsburgh and the mouth of Mahoning, 53 miles.

The Allegheny Valley Rail Road commences in the City of Pittsburgh, and will connect with the Ohio river business by a track along Duquesne way, or some other street, at the junction of the Allegheny and Monongahela Rivers; at which point, the Company has purchased the most valuable piece of ground, for the purposes intended, to be found in the city of Pittsburgh, being the entire square between Duquesne-way and Penn street, and Duquesne street and the Point, containing over four acres of ground.

After leaving the city, the line passes through the Arsenal grounds belonging to the United States Government, along the margin of the Allegheny river; the Government, with commendable liberality, having granted a free right of way for the purpose, well knowing that the rail road will afford an admirable outlet for all munitions of war passing between the Arsenal and the City, and the Northern Lakes. Thence, the line is located along the eastern or left bank of the river to the mouth of Mahoning, fifty-three miles from Pittsburgh, with moderate grades, (in no case exceeding 26.40 feet per mile ascending northward, and 10.56 feet ascending southward,) and easy curves, passing and accommodating the populous districts surrounding Sharpsburgh, Deer Creek, Tarentum, Freeport, mouth of Kiskiminitis, Clinton, Crooked Creek, Kittanning, mouth of Cowanshannock, Pine Creek, Ore-hill Furnace, and Orrsville, at the mouth of Mahoning. On the greater part of this distance. the road lies

on rich alluvial flats, already in a high state of cultivation, with well improved and valuable upland farms on both sides of the stream. The bluffs which occur, in a few instances, have not offered any formidable obstacles; those very sections now being nearer completion than some of the lighter jobs.

Whilst the flats are valuable for agricultural purposes, many of the otherwise useless narrows have been profitably devoted to Coal mining and Salt manufacturing purposes.

There are no sharp, sudden bends in the river between Pittsburgh and the mouth of Mahoning, at which point the line leaves the immediate valley of the Allegheny river; the natural curves, where they occur, being in large, graceful sweeps. In most cases, the curves on the road are easier than those of the stream, having in the location taken advantage of the alluvial flats to improve the alignment.

The level of the road has been kept above the great flood of 1832, the highest of which we have any record.

About five miles of the distance extending from Pittsburgh, and along nearly the whole of the bluff sections, the grading in the first instance is made wide enough for a double track. Also, at the new town of Hulton, opposite Deer Creek, where a principal water station, to be supplied with running water, is established. It is believed that running water may be secured for a majority of the water stations on the whole line.

In many instances the owners of property between Pittsburgh and Kittanning, (43 miles,) on which distance the right of way has been nearly all arranged, have granted the right to pass through valuable lands without charge, evincing foresight as well as liberality in the proceeding; the prospect of the rail road having already largely appreciated property all along the route. In other cases, however, the owners have shown a disposition to exact from the company the largest measure of damages.

Notwithstanding the free grants, the amount of damages paid has been considerable.

My report of July last, contains a detailed topographical description of the route from Kittanning to the New York State line, on the adopted route, passing through New Bethlehem, Brookville, Richardsville, Ridgway, Bishop's Summit and near to Smethport, which it is not necessary to recapitulate.

In referring to the Divisions of the line, which have been arranged for the convenience of construction purposes and supervision, the general features belonging to each will appear.

The First Division extends from Pittsburgh to Kittanning, 12 miles, as already described. It may be added, that at Pittsburgh it is expected to bring our road into business connection with the Ohio and Pennsylvania, the Pittsburgh and Steubenville, the Clarion Valley, the Pittsburgh and Connellsville, and the Pennsylvania Rail Roads.

The Second Division extends from Kittanning to a point in the Red Bank Valley, within 2 miles of Brookville, (43 miles.) It embraces the most expensive work on the line, including all the mountain climbing, the highest of which is 1450 feet, and the descent 700 feet, and the aggregate 5200 feet. This division has a portion of the maximum grade, beginning just above the mouth of Malheur, and reaching to Lavelly's summit, about 7 miles. From the summit of Lavelly's to the end of the division the grades are moderate, in no case exceeding 26.40 feet per mile. The Clarion Branch line intersects this division between Lavelly's and New Bedford.

The Third Division, passing through Brookville, extends from the Red Bank Valley into the Valley of the East fork of Clarion, passing over Maxwell's summit, along the little Toby, and through Ridgway, to a point 7 miles above Johnsonburg, a total length of 50 miles. The maximum grade on both sides of the summit on this division is 47 $\frac{1}{2}$ feet per mile on straight lines, softened on all the curves proportionally. On the residue of the division, the highest grade is 26 $\frac{1}{10}$ feet per mile. There are a few points of tolerably heavy work, but generally it is moderate. At Ridgway our line is crossed by the line of the Sunbury and Erie Rail Road, as the latter is now located, referred to more particularly in another place. It is also proposed to bring to this point from Ohio, the continuation of one or more roads crossing that State in a south-westerly and north-eastwardly direction, placing them in connection with the Allegheny Valley and Sunbury and Erie roads here.

The Fourth Division, commencing above Johnsonburg, in the valley of the East fork of Clarion, passes Bishop's summit and Smethport, and extends to the North-eastern terminus at the

State line of New York, a distance of 43 miles. The deep cut at the summit, on the line as now located, is not a formidable job, but there are some heavy sections on each side of the summit.

The maximum grade of $52\frac{5}{16}$ feet per mile, (reduced on all curves,) occurs in ascending and descending the main summit, 10 miles on one side and 11 miles on the other.

The remainder of the route, particularly along Potato Creek and the (upper) Allegheny river for about twenty miles, is very favorable, and the grades and curves quite easy.

The following structures are required on the whole line, 179 miles in length, namely:

- 98 Arched Culverts of stone varying in span from 5 to 25 feet.
- 285 Rectangular Stone Drains, from 2 by 2 feet to 3 by 4 feet area.
- 22 Open Passways.
- 62 Bridges, with stone abutments and piers, varying in span from 15 feet to 200 feet—the latter in a single instance only; the whole averaging 112 feet in length of superstructure to each bridge.
- 5 Tunnels. Aggregate length 5200 feet, or 80 feet less than a mile, divided as follows:

No. 1,	on section No. 55,	900 feet length.
2,	“ No. 60,	1,000 “ “
3,	“ No. 61,	1,350 “ “
4,	“ No. 62,	500 “ “
5,	“ No. 63,	1,450 “ “

One-half in length calculated to require arching, and the whole to be excavated large enough for arching.

GENERAL CHARACTERISTICS OF ROAD.

Length of main line, 179 miles. Length of side tracks, 10 miles.

Maximum grade at two principal summits, on both sides of one and one side of the other, $52\frac{5}{16}$ feet per mile, on straight lines, reduced on all curves.

General maximum grades on the line, $26\frac{4}{10}$ feet per mile.

Total ascents going north,	-	-	-	-	2,047 feet.
Total ascents going south,	-	-	-	-	1,340 “
Aggregate amount of ascents and descents,	-	-	-	-	3,387 feet.
Minimum radius of curvature,	-	-	-	-	995 “
Minimum radius between Pittsburgh and mouth of Mahoning, (53 miles,)	-	-	-	-	1,432 “
Minimum radius on 20 miles of northern end next to State line,	-	-	-	-	1,432 “

RELATING TO THE TRACK.

Cross Ties 9 feet long, 7 inches thick, and not less than 9 inches face.

2,112 Cross Ties per mile.

Ballasting, with broken stone, 2,000 cubic yards per mile.

Ballasting, with gravel, 2,500 “ “ “

Rails of **T** pattern, 60 pounds weight to the lineal yard.

RELATING TO CONNECTIONS WITH OTHER ROADS, &c.

Connections at and near the Northern end of the Road.

Since the regular organization of our company and commencement of surveys on the general route determined upon, various important rail road movements have taken place in Western New York, with a view to connections with this line, and the opening of the coal fields in McKean county, Pennsylvania. Several distinct projects originated at Buffalo, one at Attica, two at Rochester, and one at Corning. These have now assumed a tangible form, and present themselves in such a shape as to ensure the completion of the following lines at an early day, and in time to meet the opening of the northeastern end of the Allegheny Valley Rail Road.

From the intrinsic importance of these improvements, in connection with the objects of your company, no apology will be necessary for referring to their present position and prospects, somewhat in detail. The information herewith presented is derived from authentic sources, and may be relied upon as correct. Taking them in the order in which they occur, beginning with the most westerly, we have the

BUFFALO AND PITTSBURGH RAIL ROAD.

This line extends from Buffalo, through Ellicottsville, crosses the New York and Erie Rail Road at Great Valley, and intersects the Pennsylvania State line in the valley of Tunungwant, at the distance of 75 miles from Buffalo. "After some months spent in examining routes, it has been definitely located, the right of way obtained for most of the distance, and the grading, masonry, bridges, fencing, and the furnishing of ties, placed under contract. Some weeks since, the contractors, Messrs. Moore & Pierson, favorably known as enterprising and successful contractors on the Great Western Road, in Canada, commenced the grading and masonry, and have now a considerable force in men, horses, carts, &c., together with a steam excavator, employed upon the line. The intention is to have the road completed and in use by the Autumn of 1855. At the State line this road connects with the La Fayette Rail Road, which will be in effect and in fact a continuation of the Buffalo and Pittsburgh Road into Pennsylvania, to be continued southerly in time to meet the Allegheny Valley Rail Road, at such a point as shall be found most feasible and convenient."

This will open a direct connection between Pittsburgh and Buffalo, not exceeding 250 miles in length, forming part of a short and favorable passenger route (referred to elsewhere in this report) between Buffalo and the Falls of Niagara, and Pittsburgh, Baltimore, Washington City, &c.

In regard to the present and prospective coal business of Buffalo, I take pleasure in quoting from a letter received from Orlando Allen, Esq., President of the B. and P. Rail Road, in answer to certain inquiries:

"The annual consumption in and about this city probably amounts to 150,000 tons; some have estimated it as high as 200,000. It is a very difficult thing to ascertain the exact amount, arising from the fact that it comes to us by vessels down the lake, and both by canal and rail road from the east. From an estimate made a few months since, based upon the most reliable data that could be obtained, it was found that the steam craft arriving at and departing from this port during the season of navigation, consume fuel equal to about 384,000 tons of coal,

annually, and when they can be supplied with coal here as cheap as at Cleveland or Erie, they will not turn aside to those ports merely for a supply of fuel. The reasons are obvious."

"The amount of Lake tonnage arriving at, and departing from this port, during the last season of navigation was 3,056,565 tons. The great proportion of freight is down the Lake; as a consequence, many of these vessels go hence in ballast; but when coal can be furnished them here, they will no longer go in ballast,—it will be an object for them to load for the upper Lakes."

"Our neighbors in Canada have no coal. They are anxiously looking to us for a supply, when these rail roads shall be completed. Along the Lake shore it will be distributed by vessels, interiorly, by means of the various rail road lines now built and being built, connecting us with them."

"There is no ground to entertain a reasonable doubt, that, upon the completion of the B. & P. Rail Road, and those with which it is connected, and the introduction of coal at reasonable rates, the demand will be for, at least, 700,000 tons per annum, and in a little time 1,000,000 of tons. Buffalo, from her position, aided by the facilities given her by the Lakes, Erie Canal, and rail roads running from here in every direction, embracing all the different gauges in use in this country, connected with the fact already alluded to, that close upon her borders as it were, there is an abundance of bituminous coal of a superior quality, with descending grades from it almost all the way, must necessarily become the great coal mart for the whole Lake country, including a large portion of Canada, and as far East as Syracuse, and perhaps Utica."

I would only add to these clear and forcible views expressed by Mr. Allen, that, from a residence of fourteen years on the Lake and in the interior of Ohio, and considerable personal knowledge of the Lake Coal trade during that period, which covers its entire history as a business, I regard the estimate of quantity as reasonable.

Other connections with the Allegheny Valley Road will open to us a shorter and cheaper route for coal towards Syracuse and Utica; but those markets are not needed at Buffalo to make up the number of tons assumed.

It may be mentioned here, that there was another rail road projected from Buffalo towards the Coal region, called the "Buffalo and Allegheny Valley," which has recently been merged in the "Buffalo and Pittsburgh" line.

ATTICA AND ALLEGANY VALLEY RAIL ROAD.

This road will be sixty-nine miles long, from Attica to the State line, passing through Arcade, $25\frac{1}{2}$ miles from Attica. Near Arcade, a branch line, now in the course of construction. thirty-six miles in length, will connect it with Buffalo, making the distance, by this route, between Buffalo and the State line, where it will connect with the Allegheny Valley Rail Road, seventy-seven miles.

From Batavia to Attica, there are eleven miles of the old line from Albany to Buffalo, now being profitably run, so that the rail road distance from the State line to Batavia will be eighty miles.

The grading and masonry between Attica and Arcade, are about ready for the track, and a large portion of the cross-ties delivered.

The whole road is required to be finished according to the terms of the contract with Messrs. Tilden & Co. by the first of September, 1854.

It is contemplated to extend this road directly north to Lake Ontario at Oak Orchard Creek, about thirty miles from Batavia, which will afford another rail road outlet to the Lakes, and bring a populous and enterprising portion of Canada into more intimate business connection with this portion of the United States.

The Attica and Allegany Valley Road passes through the counties of Wyoming and Cattaraugus, which are well settled and populous.

An active business people reside all along the route. We may look with confidence for a large interchange of traffic in passengers, coal and general freight, between the region accommodated by this line and our Allegany Valley Road.

P. Elmslie, Esq. the Chief Engineer, who is also Chief Engineer of the New York Central Road, in his report to the A. and A. V. R. R. Co. makes some remarks, which, from their bearing on your improvement, I beg leave to quote.

“Regarding the cities of New York and Boston, and the Valley of the Mississippi and the West generally as the prominent extreme commercial sections, to be benefitted by the construction of the Attica and Allegany Valley Rail Road, I propose to offer a few suggestions connected therewith. And in order to do this, it is sufficient to assume Albany as an extreme eastern governing point, through which all the through trade and freight, due to and from the Atlantic cities must pass, and Pittsburgh as the extreme western governing point, holding a similar relation in that direction.

“It will be seen by the accompanying map, that Pittsburgh can be reached from Albany via the Attica and Allegany Valley Rail Road, in a distance more than one hundred miles less than the usual route now travelled. This, every one can see, must economize both time and money, and give this route a preference over any now in vogue. And while the New York Central Road will lose none of her lake and rail road business from Buffalo, it will receive via the Attica and Allegany Valley Rail Road and its connections, an immense additional through business from Pittsburgh, situated at the head of the Ohio river navigation, and at the confluence of the great western routes of travel, so as naturally to draw freight and travel even from St. Louis, and still farther West and South.

“Next, the Allegheny Valley Rail Road from Pittsburgh to the State line will bring to the Attica and Allegany Valley Rail Road its continuation in this State, immense quantities of superior coal, timber, lumber, produce and wool, which can be afforded at rates far lower than at any previous period, and in such quantities as to enable Buffalo, Attica, Batavia, Auburn, Syracuse, Rome, Utica and other cities in this State, and Toronto, and other places bordering on Lake Ontario in Canada, to reap advantages in the low prices of those articles, which they have never hitherto enjoyed. In fact, the Cannel Coal, known to be reached by those roads, can be afforded over the Central line, when the Attica and Allegany Valley Rail Road shall have been completed, at lower rates in Boston and New York, than ever known before.

“It is estimated, from the reports of Professor Hall, of this State, and Professor Rodgers, of Pennsylvania, that a superior

article of bituminous coal can be furnished at a cost not to exceed \$3.00 per ton, in Buffalo and Rochester, and cannel coal at less than \$6.00 per ton."

The Board of Directors of the Attica and Allegheny Valley Rail Road sustain the Chief Engineer fully in his views. They put down 205,479 tons of coal per annum, as a moderate estimate of the quantity that will be taken over their improvement and the Allegheny Valley Rail Road. In their calculations of the comparative cost of freighting between New York city and Cincinnati, they show a saving of \$2.74 per ton by this route through Pittsburgh, over the route through Cleveland.

These views and figures come from parties in another State, who are looking to the speedy opening of the Allegheny Valley Road as the only means of realizing the promises made and expectations held out in their own communities.

ROCHESTER AND PITTSBURGH RAIL ROAD.

I have received from McRee Swift, Esq., Chief Engineer of this road, the following statements, which I propose to introduce here, as a complete synopsis of all that it is important for us to know at present respecting the characteristics of this important connecting line.

"Summary of facts relating to the "Rochester and Genesee Valley" and "Rochester and Pittsburgh" Rail Roads, (a continuous line of rail road from Rochester to a connection with the Allegheny Valley Rail Road, at Ceres, on the line between the States of New York and Pennsylvania).

"Distance from Rochester to Portage, $49\frac{9}{10}$ miles, as located and partly constructed; from Portage to Ceres, $49\frac{1}{2}$ miles, *via* Angelica and Belvidere.

"Total length, $99\frac{15}{100}$ miles.

"Shortest radius, 1,910 feet.

"Length of curved line, $27\frac{4}{10}$ miles.

"Length of straight line, $71\frac{75}{100}$ miles.

"Maximum grade ascending south 65 feet per mile; total, $5\frac{1}{2}$ miles.

"Maximum grade ascending north 40 feet, in the way of greatest traffic.

"Between Rochester and Mt. Morris there is no grade exceeding 20 feet south and 20 feet north.

"Average cost per mile, exclusive of rolling stock, will be about \$25,000 per mile.

"Population of Rochester, 60,000.

"Population of 24 towns bordering on the line of road, between Rochester and Olean, is 43,000.

"The Rochester and Genesee Valley Rail Road, between Rochester and Mt. Morris, is under construction, and is about *three quarters done*. The very mile of it will be put in operation by the coming summer.

"The Rochester and Pittsburgh Rail Road has been instrumentally surveyed with much care, and from that portion of it extending from Poughkeepsie to the New York and Erie Rail Road, 24 miles, the first 10 miles, up to Olean, are now being constructed. The second 14 miles, consisting of the Rochester and Genesee Valley Rail Road, proposed to take a direct south course from Olean, thence south to Poughkeepsie, passing through the towns of Cheango, Albion and Avon, then to the New York and Erie Rail Road, at Braidley, thence up the Van Campen's and down the Little Genesee rivers to Olean, on the Oswego."

In the latter passage making this very satisfactory summary, there is an expression which should be noted: "On the construction of your road (the Allegheny Valley) depends that of the road in question."

ROCHESTER AND OLEAN RAIL ROAD

The purpose of this road was devised for a two-fold purpose. First, to make a direct connection through the Allegheny Valley Rail Road with the head of navigation of the Ohio river at Pittsburgh; and secondly, to open a new, shorter and more advantageous route for the New York and Erie Rail Road between Corning and Olean, cutting off about twenty miles from the present length of the New York and Erie Rail Road between these points, and affording rail road accommodations to an important section of country lying immediately along the State line between New York and Pennsylvania, in both States.

The surveys for this improvement were made in 1852 and

1853, under the direction of S. W. Hall, Esq., a practical engineer of much experience, who had long been in the service of the New York and Erie Rail Road Company. The result proved highly satisfactory.

The maps, profiles and estimates were duly laid before the Board of Directors of the New York and Erie Rail Road Company, when a committee of that Board, in company with McRee Swift, Esq., an experienced engineer of their appointing, visited the route, and returned a favorable report.

In the meantime, as your Board are aware, the Corning and Olean and the Allegheny Valley Rail Road Companies were in negotiation for a business union of their roads, looking to a similar union with the New York and Erie Road.

These several proceedings terminated in a triplicate agreement for the reciprocal interchange of business through the three roads, on terms believed to be advantageous to all the companies.

This agreement requires the Corning and Olean Rail Road Company to complete their road by the first of December, 1856, and to finish that portion at the western end, affording the Allegheny Valley Rail Road a connection with the New York and Erie Rail Road, at or near Olean, by the first of December, 1855, at which time the Allegheny Valley Rail Road is obligated, by the same agreement, to complete forty miles of the northeastern end of their line.

The Corning and Olean Road is very similar in its general characteristics to ours, the maximum gradient being 52.80 feet per mile going west, in passing the summit between the waters of the Canisteo and Honeoye, and 40 feet per mile going east. The distance from the State line near our north-eastern terminus, by the Corning and Olean line to the New York and Erie Rail Road at Olean, is nine miles, thence to Dunkirk by the New York and Erie Road, sixty-five miles, making the total distance from Pittsburgh to Dunkirk two hundred and fifty-three miles.

The distance from our eastern terminus to Corning is seventy-five miles, and to New York City, via the New York and Erie Rail Road, three hundred and sixty-six miles, making the total distance from Pittsburgh to New York, on the continuous track of six feet gauge, five hundred and forty-five miles.

It has been proposed to construct a rail road from Binghamton, on the New York and Erie Road, to Albany. Should this be effected, it will open an additional rail road route between Pittsburgh, Albany and Boston, on which the distance would be as follows:

Pittsburgh to Binghamton,	330 miles
Binghamton to Albany, say	140 “
Pittsburgh to Albany,	<u>470 “</u>
Albany to Boston.	200 “
Pittsburgh to Boston,	<u>670 “</u>

It is thus seen that four important lines of rail road in the State of New York, involving an aggregate expenditure of about ten millions of dollars on three hundred and forty-four miles of road, are mainly, nay, almost solely dependent on the construction of the Allegheny Valley Rail Road, and that your Company will have been the immediate cause of opening to the country upwards of five hundred miles of iron highways. This is not all, however. Before concluding this portion of the subject, I must refer to another very important connection which is to be effected by means of the western nine miles of the Corning and Olean Road, which extends your road to the Genesee Valley Canal at Olean.

CONNECTION WITH GENESSEE VALLEY CANAL.

This work has been in progress, and a large portion of it in operation for many years. It is now nearly finished throughout, and before the Allegheny Valley Rail Road can be completed, it will doubtless be in successful use from Olean to Rochester, where it connects with the main line of the New York and Erie Canal.

Those who are familiar with coal operations, and with the transportation of cheap, bulky articles of commerce, can not fail to perceive in the position of this canal another valuable outlet for the coal and other business that will accumulate along the line of your road, destined for Rochester, Syracuse and other places along the thriving and well settled region watered by the great Erie Canal.

The Pennsylvania State Canal, at Pittsburgh, will thus be connected by a direct rail road communication, only 188 miles in length, with the entire system of New York canals.

The Genesee Valley Canal is 106 miles in length, from Olean to Rochester. From Rochester to Syracuse, by Erie Canal, 94 miles, making exactly 200 miles of canal from Olean to Syracuse.

CONNECTIONS AT PITTSBURGH TERMINUS.

The rail roads completed and in rapid course of construction, terminating at Pittsburgh, with which the Allegheny Valley Rail Road will have an interchange of business, are the

Ohio and Pennsylvania,	. . .	187 miles
Pittsburgh and Steubenville,	. . .	42 "
Chartiers Valley and Wheeling,	. . .	60 "
Pittsburgh and Connellsville,	. . .	147 "
Pennsylvania Central Road,	. . .	257 "
		<hr/> 693 "

These are the lengths of the roads named, adding nothing for the still greater number of miles of rail road with which they will be in immediate connection, to which, however, some reference should be made.

1st. The Ohio and Pennsylvania Rail Road is now in rail connection with Cincinnati, through the Cleveland, Columbus and Cincinnati Road, and with Indianapolis, Madison, Louisville, Terre Haute and Chicago, through the Bellefontaine and Indiana Road, and with Toledo, Michigan, Chicago, and points farther west, through the Cleveland, Norwalk and Toledo, and other roads; and will, before the opening of the Allegheny Valley Road, be in direct connection with St. Louis, penetrating centrally across Ohio, Indiana and Illinois.

2d. The Pittsburgh and Steubenville Rail Road, although but forty-two miles in length, is a link in a very extensive chain of roads, branching out from Steubenville and running across Ohio to its northern boundary, and into connection with the great rail road systems of Ohio, Indiana, Illinois, etc. and affording another and more direct communication with Cincinnati.

3d. Chartiers Valley and Wheeling Road, passing through

the town of Washington, Washington county, Penna., thence to Wheeling, and there meeting the Central line of Ohio, presenting additional rail road connections with Central and Southern Ohio and the West, and a very direct route between Pittsburgh and Cincinnati, over the Cincinnati, Wilmington and Zanesville Rail Road—the distance by this route, between Pittsburgh and Cincinnati, being reduced to about three hundred miles, or ten hours' travel at thirty miles an hour. At Bridgeport, opposite Wheeling, the trade and travel from Marietta, and from a large portion of Kentucky, may be concentrated, and brought through Pittsburgh by these different rail road routes, namely, the Charliers Valley, the Pittsburgh and Steubenville, and the Extension of the Cleveland and Pittsburgh Road, along the Ohio river, and the eastern end of the Ohio and Pennsylvania Road.

4th. The Connellsville Rail Road, on much of its route, runs through a well-populated region, in a south-easterly direction, to its intersection with the Baltimore and Ohio Rail Road at Cumberland, bringing into rail road communication with Pittsburgh, by a short and pleasant route, a considerable part of Maryland and Virginia, and adjacent Southern States, and opening a through route from Washington, Baltimore, etc. to Buffalo and Niagara Falls, through the Allegheny Valley Rail Road, in addition to its other connections at Pittsburgh with the roads from the West.

5th. The Pennsylvania Rail Road, extending from Pittsburgh through the centre of Pennsylvania to the seat of government at Harrisburg, and thence by other roads to Philadelphia, adds immensely to the business of the City of Pittsburgh; and must continue to exert a powerful agency in its future growth, and thus increase the general business of all the roads leading from Pittsburgh.

The connection between the Allegheny Valley Road and the Ohio will be one of great consequence to the interests of your Rail Road, owing to the cheapness with which merchandise and produce is carried on the river. Taken in connection with the fact that its northern end will be united with the entire system of New York canals, also carrying very cheaply, extending to the Lakes and the Hudson river, your position in this respect is one of great strength. For a number of months every year, a

considerable amount of trade between New York and Albany, and the Valley of the Ohio, will naturally seek this route, and at all times the Allegheny Valley Rail Road will offer great facilities for the transportation of passengers and goods between the same points. When the river is obstructed, from any cause, there will always be a choice of several competing rail roads leading from Pittsburgh southward and south-westward.

INTERMEDIATE CONNECTIONS.

PENNSYLVANIA CANAL.

Above Freeport, at the mouth of the Kiskiminitis river, just twenty-nine miles from Pittsburgh, the line crosses the main line of the Pennsylvania Canal uniting Pittsburgh and Philadelphia, where a connection will be made for an interchange of traffic. The Valley of the Kiskiminitis abounds in the elements of rail road business, and will also send to the Allegheny Valley Road a considerable number of passengers. At this point the *cannel coal* from Armstrong county will in all probability be extensively shipped to Philadelphia, Baltimore, and other places on the route of the Canal.

SUNBURY AND ERIE RAIL ROAD.

At Ridgway, 121 miles from Pittsburgh, the Sunbury and Erie Rail Road crosses the line of the Allegheny Valley Rail Road. This will be a very important junction, and will lead to a large exchange of trade and travel, particularly between Central Pennsylvania and Western New York. On the completion of the Sunbury and Erie Road, it will afford an additional rail road connection between Pittsburgh and Philadelphia, through the Allegheny Valley Road, and ultimately, by the chain of roads contemplated from Williamsport through Easton, another rail road communication between Pittsburgh and New York.

At no distant period in the future, all these roads will probably be constructed.

Other branch lines, intersecting the Allegheny Valley Rail Road, have been projected, which may hereafter be more fully developed. But the above are the principal leading intermediate connections on our route.

Few rail roads in the Union can be more favorably situated in regard to connecting lines, which may be regarded as feeders; and no line ever projected from Pittsburgh has been looked to more anxiously by so many influential interests in an adjoining State. The experience on the line of the New York and Erie Rail Road tends to show that the local business alone along your line will eventually sustain it: whilst its peculiar location with respect to other roads, insures additional business, that must be largely remunerative.

I now proceed to consider several items of trade that must constitute an important and lucrative business on this Road, concerning which reliable data have been collected.

LUMBER TRADE.

In the preliminary and subsequent statements of the probable future business of your Road, *lumber* has justly been set down as an item of consideration. Many, not familiar with the magnitude and character of this trade, have been disposed to regard all calculations of rail road profit from this source as fallacious, from a vague impression that the article would not bear the charges of railway carriage. As a complete refutation of this very erroneous idea, I beg leave to submit some extracts from the recent Report of the New York and Erie Rail Road Company, as the most convincing, and indeed unanswerable, argument which can be offered. The importance of the question will plead my excuse for the length of the quotations, which appear on pages 40 and 41 of the Report referred to.

“The quantity of lumber transported during the year is one hundred and thirty thousand tons, or nearly *one hundred millions* of feet, board measure, transported an average distance of 225 miles. The receipts therefrom have been, during the fiscal year, \$383,832, which is equal to one and one-third cents per ton per mile. At the September rate of charges for transporting lumber, the receipts during the year would have been \$519,472. The present rates of freight average over one and four-fifths cents per ton per mile.

“The lumber formed twenty per cent. of the whole tonnage, thirty per cent. of the tons carried one mile, and sixteen per cent. of the whole receipts from freight.

More than half of the whole quantity was transported to tide-water, and the balance chiefly to the points of intersection with the State Canals.

The Genesee Valley ships forty per cent. of the lumber, and the Susquehanna nearly the same amount. The Allegheny ships twelve per cent., and the Delaware five per cent. of the whole quantity.

The quantity of lumber now on hand, ready for shipment, is over fifty millions of feet, of which forty millions is seasoned, and the same quantity is destined for the Hudson River.

It is estimated that there would be shipped more than two hundred millions of feet annually, for the next five or ten years, if sufficient means should be provided for transporting it.

Of this quantity one-half would be furnished from the Genesee, and one-third from the Susquehanna Valley.

Urgent solicitations have been made, by the lumber manufacturers, to have that which is now on hand transported to market, and to provide for the regular conveyance of that which is manufactured."

These statements of facts show conclusively not only the vastness of the trade in lumber, but also that the New York and Erie Rail road has not been able to afford accommodation for all the lumber seeking railway transportation.

Now in reference to the lumber regions along the line of the Allegheny Valley Rail Road, permit me to introduce another fact. It is true that it relates to but a single point on the line, in the immediate vicinity of Ridgway, 121 miles from Pittsburgh; but it is significant, and presents fair grounds of calculation for all the lumbering districts accommodated by the line of your road.

Certain gentlemen, largely connected with the lumber trade, desire to know whether your company will be prepared to take the lumber that may offer on this line. They estimate for the *northern part of Ridgway Township*, ten millions of feet annually for ten years, if it can be carried for one and three-fourth cents per ton per mile. The names of these gentlemen will be a sufficient guarantee in this community for the accuracy of the amount estimated. It is unquestionably within bounds. Add to this estimate the lumber from the south part of Elk county,

manufactured on the waters of Little Toby, Bear Creek, and at steam mills now in operation and in progress, and it will swell the annual quantity from Elk county alone to twenty millions of feet; and, in addition thereto, there will be at least ten millions of shingles.

The Potato Creek, and upper Allegheny waters, will furnish fifteen millions of feet annually. The Red Bank Valley region twenty millions.

A large portion of all this will be consumed in the Pittsburgh market. Part of it will be taken northward to the markets in New York State.

It should be recollected that the amounts named have reference only to the present lumber trade, limited to waters occasionally navigable, flowing into the Allegheny river, (the distance and difficulties of which will hereafter prevent them from being competitors with the rail road,) without taking into account the immense quantity of other kinds of timber, such as cherry, birds-eye maple, birch and poplar, abounding along the line of your road, wanting only the means of transportation to render them not only available, but extremely valuable; and without calculating the large tracts of superior timbered lands which will be brought to the light of day by the rail road. A very large increase in the quantity manufactured must take place, precisely as it has along the New York and Erie line, where the only limit seems to be the extent of rolling stock provided for its conveyance.

I have received from gentlemen engaged extensively in lumber and other business, in the vicinity of Brookville, on the Red Bank, the following information:

“ On north fork above Brookville and its tributaries, within five miles each side of the rail road, in active operation, twenty-		
two saws, cutting per annum	- -	10,000,000 feet.
On Sandy Lick branches twenty saws,	-	10,000,000 “
On Red Bank and Little Sandy Creek, below		
Brookville, fifteen saws,	- -	3,500,000 “
		<hr/>
Total feet B. M.,	- -	23,500,000

“ There will be sent to market at least 5,000,000 shingles. From pretty correct information we believe there will be

1,200,000 feet, lineal of square timber, run to market the present year, or about three millions of cubic feet, as we count it here. We have sixty stores, (Jefferson county,) with an average amount of goods sold of twenty tons each, equal 1,200 tons. Individual lumbermen lay in stocks at Pittsburgh for home use, an average of one ton each, 200 tons.

1,400 tons.

“We would be willing to pay \$4,00 per ton on this, and \$3,00 per thousand feet, board measure, for lumber, and \$22,50 per 1,000 cubic feet of timber, from Brookville to Pittsburgh, eighty-eight miles.”

In view of all the facts connected with the lumber trade, may we not assume that within a year or two after the opening of your road, you will secure the transportation of not less than sixty millions of feet annually, equal to 75,000 tons of seasoned stuff, on an average distance of one hundred miles, which, at two cents per ton per mile, which the trade can afford to pay, will yield an annual income of one hundred and fifty thousand dollars, from the single item of lumber?

COAL TRADE.

From experience in Eastern Pennsylvania, in this region, and in Ohio, we have data from which inferences may be drawn respecting the probable coal business of the Allegheny Valley Road.

The whole coal trade, however, including the millions of tons mined in Eastern Pennsylvania, has sprung into existence, and attained its present importance within a very brief period, and is, even yet, in its infancy. The coal trade of the lake region is but a thing of yesterday, but destined, ere long, to rival that of the East, as now it exists. Any one who has watched its steady increase at Cleveland and Erie, and the annually augmenting commercial demand for coal as a fuel for steamboats and propellers, (which are gradually superseding sail vessels) must have been struck with the great change which has taken place within the last five or six years. Experience in the west is beginning to establish the truth admitted in the east, that the coal regions can scarcely be developed, and furnished with the

requisite rail road and other facilities, rapidly enough to keep pace with the growing demand. It is already evident that the great coal basin of Northwestern Pennsylvania must soon be brought into active requisition for the proper supply of the lakes, Western New York and Canada.

The extreme western limit of this coal field, in Pennsylvania, is already tapped by the Erie extension canal, and an artificial outlet thus opened for it to a certain extent, at Erie, a large portion of which is for shipment to other points, and for the use of steamers. From Erie and Cleveland nearly all the coal required in the lake region is now purchased. Much the larger portion is received at Cleveland, from the mines in Ohio, distant from 50 to 100 miles, and from the mines near Pittsburgh, distant 140 miles. Buffalo, which is even now a considerable consumer, imports largely from Cleveland and Erie.

An examination of a map will show that Buffalo happens to be within convenient distance of the extensive coal fields of McKean, Elk and Jefferson counties, in Pennsylvania, along the line of the Allegheny Valley Rail Road. Her citizens, tired of the uncertainty, irregularity and cost of the supply from other quarters, have determined to reach these fields by direct rail roads, the distance being only one hundred miles from the northern boundary of the coal bearing region to Buffalo.

The Allegheny Valley Rail Road passes through, and in such a way, as to command an immense area of these lands. For the ensuing few years, those from 25 to 50 miles from the State line may conveniently supply the demand; but if we judge from results west of the mountains, but a short time will elapse, ere coal lands, still farther south, must be opened for northern markets. In Jefferson county, I have examined a bank of superior bituminous coal, eleven feet in thickness. The cheapness with which such a vein can be worked, will be an inducement to bring it into market.

The veins nearer to the State line, are from three to five feet in thickness, where they have been opened; but they have been operated only to a very limited extent, and not at all by men of experience in the business.

The rail roads now in progress of construction from Buffalo, are intended to unite with the Allegheny Valley Rail Road;

and although the primary object of the citizens was originally the control of convenient access to the coal deposits, yet they regard these rail roads as parts of a great through line, for all purposes of intercommunication between Buffalo and Pittsburgh. These considerations, namely, the coal fields and the proposed Allegheny Valley Rail Road, have led to the organization of two distinct rail roads, leading from Buffalo in the direction of Pittsburgh, on such a basis as will insure their construction before the Allegheny Valley Road can be completed; so that whenever your road is opened to the State line, it will be in rail road communication with Buffalo. From its proximity to our coal region, and the favorable character of the rail road routes, Buffalo will, at once, become a *shipping*, instead of an importing, port for coal. There can be no doubt of this, because coal can be delivered at Buffalo at about the same price per ton, that it now costs in Cleveland. Gentlemen acquainted with the wants of that city, have offered to obligate themselves to take 500,000 tons of coal per annum, as soon as it can be brought there directly by the "Buffalo and Pittsburgh" Rail Road, from the La Fayette mines, in Pennsylvania. The "Attica and Allegany Valley," "Rochester and Pittsburgh," and "Corning and Olean" rail roads, all connecting with your road, will afford rail road outlets for coal, (as well as other articles,) through extensive and populous portions of the State of New York. Your junction with the Genesee Valley Canal, at Olean, will open another important avenue for the coal business, over a large area of country watered by the Erie Canal.

When coal can be delivered and sold to boats, at Olean, for not exceeding \$2 per ton, as it will be, an immense consumption must take place. The same article can be delivered, via the canal, (106 miles from Olean,) and sold in Rochester at \$3 per ton, or about that rate; and at Syracuse, 94 miles farther by canal, at not exceeding \$4 per ton.

Within a few years after the opening of your road and its various northern connections, as first intimated, bringing you into intimate union with these extensive coal consuming districts, the amount required annually will be very great.

The Salt works at Syracuse, now consume over 120,000 cords of wood, at a cost of not less than \$4 per cord; and the City

of Syracuse, with a population of 30,000, would require sixty thousand cords more, making an aggregate of one hundred and eighty thousand cords. If coal were substituted, 90,000 tons would be equivalent, which, at \$4 per ton, would be \$360,000. This represents the amount that would be saved to the people annually at this single point, by the introduction of the coal from the Allegheny Valley Rail Road; a sum which would go far toward constructing a rail road from Olean to the coal region.

With these facts before us, cannot your road reasonably calculate on carrying, at an early day, 500,000 tons annually over forty miles of its northern end? This, at 1½ cents per ton per mile, would yield \$350,000.

CANNEL COAL.

Cannel coal may also become a heavy item of transportation. The *Johnston* vein of this coal, which has been opened near *New Bethlehem*, along the Red Bank valley, is from 7½ to 8 feet in thickness. This lies above the level of our road, and within a mile of the line, in such a position as to admit of a rail road from the mine to the main road, on any grade that may be preferred. It is 34 miles from the canal, at the mouth of the Kiskiminitis River, 63 miles from the City of Pittsburgh, and 125 miles, by rail road, from the Genesee Valley Canal, at Olean.

This coal which has been pronounced by good authority to be a superior article, can be delivered into canal boats at the mouth of the Kiskiminitis, for \$1.55, and in Pittsburgh for \$2 per ton, upon a large and regular supply. It can be delivered into canal boats at Olean, for \$3.55 per ton. The same article can be delivered in Philadelphia, via the Pennsylvania Canal, at \$6.50 per ton. A distinguished chemist in the West, who has analyzed this coal, remarks, that "it is an excellent quality of coal, perfectly adapted to evaporating purposes, for blast furnaces, also for cooking or parlor use." An eminent Professor of Boston, who has also carefully analyzed it, says: "the coal is a true cannel, in chemical characters. I regard it as a valuable addition to our kinds of coal. If it can be sent here at a reasonable rate, it will take the place of cannel, now imported."

These are strong testimonials in its favor, from which the

Board and all who feel an interest in the success of the Allegheny Valley Rail Road, can draw their own inferences.

Certainly, if any cannel coal can become an article of commerce between the west and the eastern cities, it is this. It can be delivered in Albany, for about \$7 per ton.

No estimate of tonnage is presented in connection with this article, but it is eminently worthy of consideration.

CLARION BRANCH RAIL ROAD.

The survey of the route for a branch road starts from Station No. 1,088 of the main line, $1\frac{29}{100}$ miles from the north end of Lavelly's tunnel, $26\frac{6}{10}$ miles from Kittanning, and within $\frac{3}{4}$ of a mile of New Bethlehem.

It immediately crosses the Red Bank by a bridge of two spans of 125 feet each, at an elevation of fifty-eight feet above the bed of the stream, and passes through the narrow neck of the Big Bend of Red Bank by a very favorable short cut, but twenty-one feet in depth in the deepest place. This line then pursues the right bank of the Red Bank to the mouth of Leatherwood Creek, $2\frac{35}{100}$ miles. The height of grade at the starting point is 376 feet above the base line at Kittanning. At the mouth of Leatherwood it is 314 feet, showing a descent of sixty-two feet, or an average grade of twenty-six feet per mile. The work on this portion is very similar in character to that on the main line between Lavelly's and New Bethlehem, except that the curvature is greater.

In a final location of the branch line it may be found advisable to connect with the main road at a point about three-fourths of a mile nearer to New Bethlehem, crossing the Red Bank with a low bridge, and making a deeper cut through the neck of the Big Bend.

From the mouth of Leatherwood to Frostburg, in the valley of Leatherwood Creek, the line will cross the stream seven times on low bridges, of about forty feet length each, taking the full advantage of the valley for securing the most direct line. The distance from the mouth of the stream to Frostburg is $4\frac{71}{100}$ miles, the ascent 226 feet, or at the rate of 48 feet per mile. The height of grade at Frostburg is 540 feet. Although the Leatherwood is crossed frequently, this will not be an expensive

piece of road to construct. It passes by and accommodates Kerr's furnace and Corbett's mill.

From the village of Frostburg the line is traced up Meal's branch of Leatherwood (this having proved the most favorable on an examination of all the branches,) to Meal's summit, 2.54 miles from Frostburg, where our grade attains an elevation of 672 feet, showing an ascent of 132 feet in that distance, or an average of 44.97 feet per mile. At this main summit is encountered the only heavy deep cut on the entire length of the branch line. It is seventy feet deep at the apex of the hill, but tapers off on each side so that the whole length of the cut from grade to grade on either side is but 1,700 feet. It contains 133,056 cubic yards of excavation. From Meal's summit the line descends into the valley of Meal's branch of Licking, passing in the first mile the heaviest embankment on the whole route, containing 465,320 cubic yards. The heaviest work, both of cutting and filling is thus comprised in the space of 1.36 miles. The remainder of the route, through the beautiful valley of the Big Licking, is remarkably favorable in all respects. At the distance of six miles from Frostburg it passes through Curllsville, on a descending grade of 23 $\frac{1}{2}$ feet per mile, and at 6.82 miles through Fillmore. At 9.20 miles it passes close by and accommodates Shio furnace. At 9.50 miles it crosses Anderson's Run. At 9.89 miles it passes Craig's saw mill, and at 10.11 miles Craig's grist mill. At 12.80 miles the line passes between Callanburgh and the village of Eaton, being convenient to both places. Thence it passes to the immediate valley of the Clarion river, at Station No. 358, 13.56 miles from Frostburg.

The distance from Meal's summit to the valley of the Clarion is 11.02 miles, and the total descent 462 feet, being an average of 41.92 feet per mile.

From Station 358 the line continues along the left bank of the Clarion, with very moderate grades and easy work, with the exception of the crossing of Piney Creek at its mouth, where a bridge of two spans of 100 feet each, and some work to accommodate Hahn's mill race and boat-yard are necessary. The following notable points occur along the river, measuring, as before, from Frostburg: At 14.66 miles, Henderson's Run;

at 15 miles opposite, Beaver Creek; at 17.05 miles, Dille's Eddy; at 18.90 miles, Beck's old distillery; at 19.30 miles opposite, Job Packer's; at 19.77 miles, mouth of Piney, (above referred to;) at 19.85 miles, Hahn's mill; at 21 miles, Piney Eddy; at 22.84 miles, Boyd's Eddy; at 23.07 miles opposite, Bellow's rock; at 24.24 miles, the Devil's Race Ground; at 25.11 miles, Gourly's Run; at 25.95 miles, Cather's Run, and at 27.69 miles the survey was closed, at the bridge over Clarion river for the Susquehanna and Waterford turnpike, opposite the town of Clarion, 34.74 miles from the point of departure on the main line.

Should it be deemed expedient hereafter, on a final location, to carry the line into the lower part of the town, it may be accomplished by starting from near the mouth of Cather's Run, and adopting higher gradients.

The season being late when the branch line surveys were concluded, it was not considered expedient to continue the party in the field for the purpose of further elaborating the surveys—the main object, namely, a correct general knowledge of the ground covered by the resolutions of the Board, having been attained.

The ascent in the valley of the Clarion river, from station 358 to station 731, at the end of the survey, on a distance of 14.01 miles, is 88 feet, being an average of 6.24 feet per mile. No descending grades were introduced in passing along this part of the route. The grade height at the end of the survey is 298 feet, being 78 feet lower than the starting point on the main line.

The results of this survey, as exhibited in the well-arranged maps, profiles and calculations, finished under the immediate direction of Mr. Wright, aided by Captain Alexander Hays and Mr. Charles E. Byers, and their assistants, I regard as highly satisfactory and favorable.

It is now established, that there is a good rail road line to be had over the route designated by the Board, having generally moderate grades and easy curves, with very little heavy work. In overcoming the principal summit at Meal's, it is necessary to exceed the maximum grade of $52\frac{8}{10}$ feet per mile for short distances; and at a few points along the Red Bank valley, we shall be compelled to adopt a shorter minimum radius of curvature;

in no case, however, less than is employed on the main line of the Pennsylvania Rail Road.

On the whole distance of 34.74 miles, the total	
ascent overcome is - - - - -	454 feet.
Total descent, - - - - -	532 "
Aggregate rise and fall, - - - - -	986 "
Eight miles of the route are level.	

ESTIMATED COST OF BRANCH RAIL ROAD.

A careful estimate of the cost of graduation, masonry, and bridging, has been made, which, including ten per cent. for contingencies and engineering, and exclusive of right of way and damages, amounts to \$8,326 per mile, and for the 34.74 miles, to the gross sum of \$289,227.87.

The cost of the track and superstructure will depend on the kind to be adopted. If a first class superstructure, with a 60 pounds rail, and with turn-outs, complete, it will be about \$41,000 per mile. But a very good track, which would answer all purposes for many years, could be laid down for \$7,000 per mile, which would make the total cost, exclusive of rolling stock, depot buildings, and damages, \$532,407.87—equal to \$15,326 per mile.

The construction of this Branch Road would accommodate 16 furnaces in Clarion county, which will yield annually 24,000 tons of metal, requiring a return of merchandise from Pittsburgh of 3,200 tons. These would pay toll over an average of 80 miles of road at the rate of \$2.50 per ton for the iron, and \$4 per ton on merchandise, which would yield annually \$72,800.

It is the opinion of those who have the most experience in the iron business of this great iron region, that these rates will secure the carriage by rail road of the articles mentioned, as well as of thousands of tons of ore and limestone, to be transported locally on different sections of the road. And when to the above is added the general business, and the carriage of passengers for a large portion of Clarion county, the annual receipts arising to the Company in consequence of the construction of this branch, promise a fair remuneration. Twenty-five passengers per day, each way, would, in my opinion, be a very low estimate of the additional travel that this branch would

furnish on an average distance of 80 miles, which, at $2\frac{1}{2}$ cents per mile, would be \$100 per day, and for 313 days, \$31,300.

These estimates have reference only to the present population and business of a county of great agricultural capabilities, which is rapidly increasing in inhabitants and wealth.

Its prospects of being a good paying road, in connection with the use of the main line, are excellent. It would add very considerably to the general business, and its construction is of great consequence to a large number of enterprising citizens.

I desire it to be understood, however, that in my estimates and remarks upon the main line and its prospects of business, etc. the trade from the branch road has not been taken into account.

THE ALLEGHENY VALLEY RAIL ROAD

Considered as part of a Through Route from Washington City, Baltimore, etc. to Buffalo and Niagara Falls.

As a route between the South and North, the Allegheny Valley, in connection with the Pennsylvania Central and Pittsburgh and Connellsville Rail Roads, offers a short, cheap and convenient route to travelers. The comparative distances by this and other routes now used, are as follows—thus :

VIA CONNELLSVILLE RAIL ROAD.			
Baltimore	From Connellsville to Pittsburgh,	- -	325 miles.
	From Pittsburgh to Buffalo,	- - -	250 "
			<hr/> 575 "

Via the present usually traveled route, through the cities of Philadelphia and New York, and the New York and Erie, and Buffalo and New York City Rail Roads, to Buffalo :

From Baltimore to New York,	- -	190 miles.
From New York to Buffalo,	- - -	424 "
		<hr/> 614 "

VIA CLEVELAND.

From Baltimore to Pittsburgh, as above,	325 miles.
" Pittsburgh to Cleveland,	. . 140 "
" Cleveland to Buffalo,	. . 186 "
	<hr/> 651 "

The difference in favor of the Allegheny Valley Road, is thirty-nine miles over the New York City route, and seventy-six miles over the route by Cleveland. But this is not all. On the New York City route, passengers must lose time, change cars and re-check baggage at Philadelphia, and at New York, and pass over four different rail roads. On the Cleveland route, they must lose time, and change cars at Pittsburgh, and lose time, change cars, and re-check baggage at Cleveland, and pass over six different rail roads.

On the Allegheny Valley route, they will pass over but three different roads, and lose time and change cars but twice; and, in case the Pittsburgh and Buffalo Rail Road should adopt the broad gauge, but once between Baltimore and Buffalo. A branch line, leading from the Connellsville Rail Road to Washington City, has been proposed, which, if completed, will shorten the distance between Washington City and Pittsburgh (and, of course to the Lakes,) forty miles. But, without this, it is obvious, that there will be a saving of time, money and annoyance, between Washington and Baltimore and Buffalo and Niagara Falls, by the Allegheny Valley Road.

There is a considerable amount of traveling every year, from the interior of Virginia and Maryland, and the south-western parts of Pennsylvania, to and from the attractive points named in the north, which will be most conveniently accommodated by the opening of your road. This is applicable, also, to the travel from the immediate valley of the upper Ohio, especially from Pittsburgh. When travelers can be conveyed from Pittsburgh to Buffalo in ten hours, and to Niagara Falls in one hour more, at a cost not exceeding six dollars, (and, with excursion tickets, at even lower rates,) a large summer travel to these favorite resorts, by this route, may be looked for.

At Buffalo, and Niagara Falls, travelers desiring to proceed farther westward, will have a choice of routes, either along the lake shore lines, on the southern border of Lake Erie, or by the shorter route, through Canada, to Detroit. The distance from Niagara Falls, by the new route through Canada, is 228 miles. Although this range of connections, can, by no means, be regarded as a primary object of your company, it should not be overlooked or disregarded.

It is a remarkable circumstance in the history of rail roads, that Pittsburgh was the last of the larger cities in the Union to embark in their construction.

Whatever may have been the causes of this apparent apathy in regard to the greatest commercial lever of the age, they seem to have disappeared, and she is now rapidly taking the same relative stand with respect to this modern means of internal communication, that she sustained years ago, when depending almost solely on the natural advantages of her position. Without the rail roads now finished and in the course of completion, meeting at the head of navigation on the Ohio, this position, commanding as it is, would avail her but little in the great contest which is going on for commercial and manufacturing supremacy. With them, her destiny is sure and onward.

Among the artificial improvements calculated to strengthen and uphold her claims as a great interior city, the Allegheny Valley Rail Road must take high rank. Through this new avenue, will be brought, not only an immense new business from a large district in Pennsylvania, but, in addition thereto, a vast amount of trade and travel from the States of New York and New England, in which Pittsburgh has yet had no share. No other line of improvement could effect the same results.

Time will establish the correctness of this conclusion. Let those who have been distrustful, look back a few years to the period when the only artificial improvements were, the Turnpike, and the Pennsylvania Canal in its early stages. Compare the population and business of that day, with what we see now. Let them recur to the doubts and misgivings which have invariably attended the first inception of every great work, which has since followed: the Monongahela Navigation, the Pennsylvania Central, the Ohio and Pennsylvania, and Cleveland and Pittsburgh Rail Roads, every one of which, even before its completion throughout, has been marked with triumphant success. Who would have been supported in his calculations and estimates, by public opinion here, if he had foretold, that in 1853 three hundred and fifty-eight thousand passengers would pass in one year over the Ohio and Pennsylvania Rail Road, and that one hundred and nine thousand seven hundred passengers would be carried in steam boats on the Monongahela navigation; and that,

in the same period, five hundred and seventy-seven thousand tons of coal and agriculturul products would pass through its locks?

The prestige of success which belongs to these works, strengthens the claims of your line to favorable public attention, whilst the facts which we have gathered are in themselves sufficient proof that the expectations indulged by the friends of this road are well founded.

With the knowledge of what may thus be reasonably anticipated, I submit confidently an approximate estimate of your probable business during the second year after the road shall have been finished, and placed in connection with the works in progress, hereinbefore referred to. The second year is assumed, because some time is required to organize certain branches of trade on a new route; particularly the coal business, which must form a heavy item; and because nearly all western rail roads are, in the beginning, inadequately furnished with motive power and cars to do the business offering.

Should your company be an exception to this general rule, and procure in the outset an abundant rolling stock, the results given below may be sooner realized:

ESTIMATE OF BUSINESS.—179 MILES.

75 through passengers per day, <i>each way</i> , at	
\$4,00=\$600, and for 313 days, - -	\$187,800 00
250 way passengers per day on an average distance of 60 miles, at \$1,50 each=\$375,	
and for 313 days, - - - -	117,375 00
45 tons per day of general <i>through</i> freight, each way, at \$4,50 per ton=\$405, and for	
313 days, - - - -	125,765 00
80 tons per day of general <i>local</i> freight on an average distance of 60 miles, at \$2,00	
per ton=\$160, and for 313 days - -	50,080 00
70 tons per day of metal on an average distance of 50 miles, at \$1,50 per ton=\$105, and	
for 313 days, - - - -	32,865 00
Carried forward, - - - -	<hr/> \$513,885 00

Brought forward, - - -	\$513,885 00
20 tons of domestic salt per day on an average distance of 35 miles, at 70 cents per ton=\$14, and for 313 days, - -	4,382 00
15 tons plaster per day from New York State, on an average distance of 90 miles, at \$1,80 per ton=\$37, and for 313 days,	8,451 00
50 tons of stone, limestone, ores, etc., per day, (local trade,) on an average distance of 25 miles, at 50 cents per ton=\$25, and for 313 days, - - - - -	7,825 00
600 tons of coal per day on 40 miles of northern end, at 70 cents per ton=\$420, and for 313 days, - - - - -	131,460 00
200 tons of coal per day on an average distance of 10 miles nearest Pittsburgh, at 25 cents per ton=\$50, and for 313 days,	15,650 00
120 tons per day of lumber, timber, etc., on an average distance of 90 miles, at \$1,80 per ton=\$216, and for 313 days, -	67,608 00
Express business each way per day, \$45=\$90, and for 313 days, - - - -	28,170 00
Carriage of mails \$200 per mile, 179 miles, -	35,800 00
	<hr/> \$813,231 00
Deduct 45 per cent for running expenses, maintenance and repairs, - - - -	365,954 00
Leaves net profit for the year, - - -	<hr/> \$447,277 00

I ask from the Board, and others, a careful examination of this estimate, in its details, and in the aggregate, believing as I do, that it is within reasonable bounds in every item. On the Ohio and Pennsylvania Rail Road, which is but eight miles longer than your line, the estimate of the Superintendent for its second year's earnings is \$900,000. From my knowledge of the western business I will venture the prediction, that if that company will furnish their road adequately, their receipts will exceed a *million* during this fiscal year.

In reference to our Allegheny Valley route, I beg leave, before concluding, to introduce a short extract from the last very able report of the New York and Erie Rail Road company, as follows :

“Arrangements have been made for the construction of a rail road of the broad gauge from Corning, in nearly a direct line to Olean. This road when completed, will be run in connection with the New York and Erie.

At Ceres, on the line of this road (ten miles east of Olean) a connection will be formed with the Allegheny Valley Rail Road, now rapidly progressing, which will save about twenty-five miles of distance, to all places west and south-west of Corning, with more favorable grades and alignment than those of the present road between Corning and Olean.

These roads, together with the Erie, will make the shortest and best line, from the head of navigation on the Ohio, to New York, and will soon open the trade of the valleys of the Allegheny and upper Ohio, (so rich in agricultural and mineral products,) and also complete the communication to the Ohio, from which they will receive large contributions, in consequence of the extraordinary cheapness of transportation on that river.”

Does it not appear, then, that the Allegheny Valley Road, with its valuable connections at Pittsburgh and intermediate points, and with the canal and rail road systems of New York, through which it will be placed in communication with Canada, and New England, taken in connection with the vast mineral and agricultural treasures along its entire route, is one of the most important uncompleted thoroughfares in the United States!

To the gentlemen of the Engineer department already named, and Assistants J. Q. Anderson, H. J. Brunot, Frank Boylan, R. T. Gray, Alexander Coulter and J. M. Curley, on the locations; Captain T. J. Brereton, and Messrs. James C. Noon and I. Morely, Assistant Engineers in charge of construction on the first division; J. J. Siebeneck, Draughtsman, and the junior members of the corps generally, I return my thanks for the diligent and correct manner in which their respective duties have been executed. I regret that the engagements of Captain Brereton in the military service of the United States, required him in December last to resign his post on our road.

Respectfully submitted,

W. MILNOR ROBERTS,

Chief Engineer.

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TREASURER'S STATEMENT.

From February 12th, 1852, to February 1st, 1854.

To Amount received from Stockholders, - - -	\$103,037	50
“ “ from Contractors on construction, - - -	61,531	26
“ “ from sales of securities, - - -	175,471	90
“ “ from notes and bills disc'ted, &c. - - -	74,447	85
“ “ retained per centage, - - -	50,343	76
	<u>\$464,832</u>	<u>27</u>

CONTRA.

By am't expended on grading, masonry, bridging, &c. - - -	\$336,639	56
“ “ for instrum'ts, tents, tools, stationery, &c. - - -	4,696	37
“ “ for preliminary surveys, and expenses, prior to construction, - - -	41,191	21
“ “ Engineering expenses on construction, - - -	6,660	07
“ “ Salaries of Officers, Clerks and Agents, - - -	6,549	00
“ “ Office exp's, postage, print'g, adver'g, &c. - - -	2,210	30
“ “ Counsel fees, - - -	1,850	00
“ “ interest on stock, &c. - - -	5,451	61
“ “ commissions, charges, interest, profit & loss, - - -	6,657	27
“ “ maps, miscel'us and incidental charges, - - -	2,444	82
“ “ Rights of way and land damages, - - -	23,584	12
“ “ Real Estate, fencing and taxes, - - -	22,003	33
“ “ Cash on hand, - - -	4,894	61
	<u>\$464,832</u>	<u>27</u>

[E. E.]

JOHN T. LOGAN, *Treasurer.*

